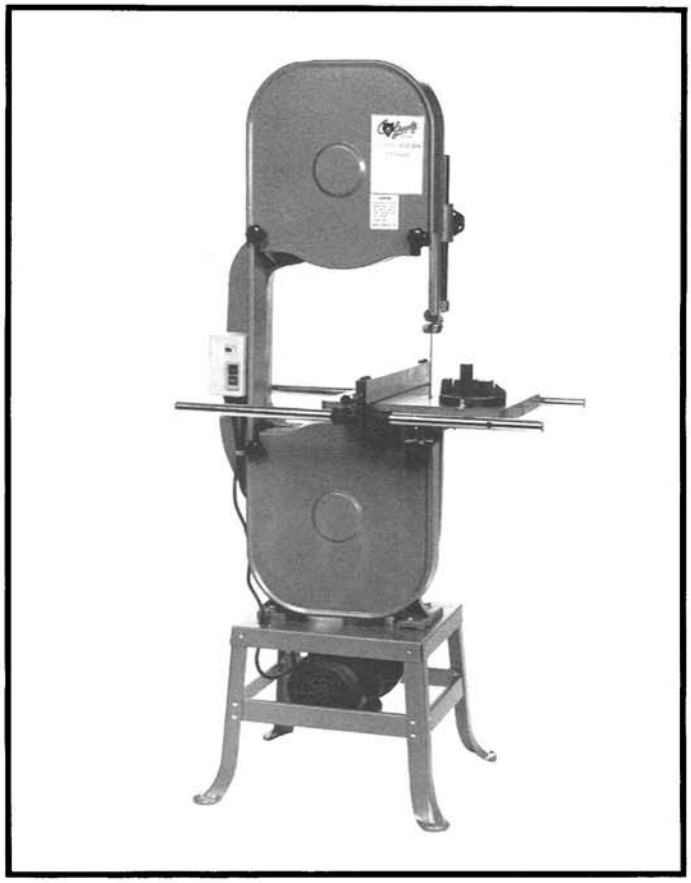
16" BAND SAW
MODEL G1538
INSTRUCTION MANUAL



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Williamsport, PA 17701
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WARNING

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paints.
- Crystalline silica from bricks, cement, and other masonry products.
- Arsenic and chromium from chemically treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

WOODWORKING EQUIPMENT SAFETY INSTRUCTIONS

⚠WARNING

For Your Own Safety Read Instruction Manual Before Operating This Equipment

Woodworking can be fun and rewarding, however it can also be a dangerous activity if safe and proper operating procedures are not followed. Please take the time to review the manual which was supplied with your machine, as well as these general safety instructions. Make sure you have properly assembled and adjusted the machine before operating it the first time. Also make certain you understand the procedures you are going to perform. Thinking through the steps or going through the motions of the operation with the machine off is often a good way to anticipate potential problems. Always use common sense and exercise caution in the workshop. If a procedure feels dangerous or awkward, don't do it!

If the instruction manual does not answer your questions, or you cannot find assistance from other woodworking books or references, please contact Grizzly Industrial's Customer Service:

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⚠WARNING

Safety Instructions For Power Tools

1. **KEEP GUARDS IN PLACE** and in working order.
2. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form a habit of checking to see that keys and adjusting wrenches are removed from tool before turning on.
3. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
4. **DO NOT USE IN DANGEROUS ENVIRONMENT.** DO NOT use power tools in damp or wet locations, or where any flammable or noxious fumes may exist. Keep work area well lighted.
5. **KEEP CHILDREN AND VISITORS AWAY.** All children and visitors should be kept a safe distance from work area.
6. **MAKE WORK SHOP CHILD PROOF** with padlocks, master switches, or by removing starter keys.
7. **DO NOT FORCE TOOL.** It will do the job better and safer at the rate for which it was designed.
8. **USE RIGHT TOOL.** DO NOT force tool or attachment to do a job for which it was not designed.

⚠WARNING
Safety Instructions For Power Tools

9. **USE PROPER EXTENSION CORD.** Make sure your extension cord is in good condition. Conductor size should be in accordance with the chart below. The amperage rating should be listed on the motor or tool nameplate. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. Your extension cord must also contain a ground wire and plug pin. Always repair or replace extension cords if they become damaged.

Minimum Gauge for Extension Cords

	LENGTH		
AMP RATING	25ft	50ft	100ft
0-6	16	16	16
7-10	16	16	14
11-12	16	16	14
13-16	14	12	12
17-20	12	12	10
21-30	10	10	No

10. **WEAR PROPER APPAREL.** DO NOT wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.

11. **ALWAYS USE SAFETY GLASSES.** Also use face or dust mask if cutting operation is dusty. Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses.

12. **SECURE WORK.** Use clamps or a vise to hold work when practical. It's safer than using your hand and frees both hands to operate tool.

13. **DO NOT OVERREACH.** Keep proper footing and balance at all times.

14. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

15. **USE RECOMMENDED ACCESSORIES.** Consult the owner's manual for recommended accessories. The use of improper accessories may cause risk of injury.

16. **REDUCE THE RISK OF UNINTENTIONAL** STARTING. On machines with magnetic contact starting switches there is a risk of starting if the machine is bumped or jarred. Always disconnect from power source before adjusting or servicing. Make sure switch is in OFF position before reconnecting.

17. **MANY WOODWORKING TOOLS CAN "KICKBACK" THE WORKPIECE** toward the operator if not handled properly. Know what conditions can create "kickback" and know how to avoid them. Read the manual accompanying the machine thoroughly.

18. **CHECK DAMAGED PARTS.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.

19. **NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF.** DO NOT leave tool until it comes to a complete stop.

20. **NEVER OPERATE A MACHINE WHEN TIRED, OR UNDER THE INFLUENCE OF DRUGS OR ALCOHOL.** Full mental alertness is required at all times when running a machine.

⚠CAUTION

No list of safety guidelines can be complete. Every shop environment is different. Always consider safety first, as it applies to your individual working conditions. Use this and other machinery with caution and respect. Failure to do so could result in serious personal injury, damage to equipment or poor work results.

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I. INTRODUCTION

Thank you very much for your purchase!

Before introducing you to the equipment, there are a few things we would like to share with you:

First, we sincerely appreciate your business. For those of you who have purchased from us before, you know well of our commitment to customer service and value. If this is your first purchase from us, you can count on our very best effort to earn your future purchases of shop tools, supplies, and accessories.

Second, we want you to know that at Grizzly Imports, when we say we listen to our customers, that is not merely a slogan, we truly mean it. The manual you presently have in hand is one example of this commitment.

You see, we have observed - as have our customers - that even though our quality of merchandise was very high, the documentation frequently left something to be desired owing, of course, to language and cultural differences. Any of you who have previously purchased imported machinery before have, no doubt, been victims of this problem! At Grizzly, we have made up our minds to do something about it.

Some time ago, we set out on a five-year plan to upgrade our technical documentation. The idea was to prepare technical literature that was complete, correct, helpful, and written in "American" for ease of understanding. The goal was to cover our most popular tools and machines first, then eventually cover our entire product line. This manual is an example of this "first generation."

Thirdly, we need your help. Do you see any errors in this manual? Is there something that we could have done a better job on? The Bear tries hard to please - he really does! - but he is not perfect. He also welcomes critique on how to make this, and similar manuals, more useful and informative. If you see a place where we could do better, please contact us as follows:

Manager, Technical Documentation
Grizzly Imports, Inc.
P.O. Box 2069
Bellingham, WA 98227

Please indicate, when you write, the manual and machine your are commenting on, the model number of the equipment you own, and a write-up of what you have in mind. Include drawings and/or sketches if appropriate, or alternately, remove pages from this manual and mark them up. We will, of course, replace them with a new manual.

Thank you again for your business. Now let's check out your new bandsaw!

II. COMMENTARY

With the addition of our 16" G1538 Bandsaw, we now have a full complement of bandsaws to choose from. This saw offers the rugged reliability of our 18" Bandsaw at a very competitive price, while only reducing its size 2".

The cast iron construction of the main frame offers stability and strength. The inclusion of the 3-speed pulley and an increased cutting height makes this machine a versatile wood cutting tool.

The saw comes standard with stand, fence, miter, motor, guards, and a complete electrical package. All bearings on this equipment are shielded and require no maintenance on your part for life. Other points of maintenance are few and simple to attend to.

The G1538 Bandsaw is a simple, fundamental machine - a plus in any workshop. Given reasonable care and maintenance, we are confident that your new Bandsaw will provide years of enjoyable, dependable service.

If you are a novice woodworker, there is quite a bit of reading material on sawing techniques available through woodworking magazines and trade journals. Another good source is your local library. Also by talking with a vocational instructor or professional woodworker, you can receive all kinds of hints, tricks, and techniques to assist you in your endeavor.

Before we go to work, here are a few thoughts we want to share with you.

A lot of the parts on the Bandsaw are made of steel sheet metal, which, as you may know, is subject to "spring-back" when it is formed in the manufacturing process. Therefore, do not be overly concerned if one or more parts need to be "tweaked" to get the holes to line up, say for a bolt. On the other hand, don't be brutal in forcing the parts together. Chances are that if the parts in question really do **not** want to go together, they're **not** supposed to. Common sense is your best guide here, and of course, it goes without saying, call us or write if you think you've got a problem.

All stamped sheet metal parts have a sharp burr edge on them after they are made. The manufacturer's job, of course, is to remove these. Generally, our supplier does an excellent job of doing exactly that. Nonetheless, occasionally one or two "slivers" will sneak through. Please check out the edges **before** running your finger or the palm of your hand down them, OK?

It is necessary to be thoroughly familiar with a power tool **before** attempting to operate it. Safe operation on any tool depends heavily on the familiarity one has for the product. Take as much time as necessary in becoming familiar with the Model G1538. The time you invest **before** you begin to use this machine will be time well spent. Read and apply the safety rules.

The specifications, drawings, and photographs put forth in this manual represent the Model G1538, as supplied when this manual was prepared. However, owing to GRIZZLY'S policy of continuous improvement, changes to the Model G1538 may be made at any time with no obligation on the part of GRIZZLY.

The information contained in this manual has been obtained from sources believed to be reliable and as up-to-date as possible. This manual is not intended to serve as a complete guide for bandsawing techniques. The focus is on proper set up and safety concerns that are required in the use of the Model G1538. GRIZZLY also cautions, it cannot be assumed that all acceptable safety measures are listed or that other additional measures are not needed under particular or exceptional circumstances or conditions.

III. SAFETY RULES FOR ALL TOOLS

As with all power tools, there is a certain amount of hazard involved with the operator and his use of the tool. Using the tool with the respect and caution demanded, as far as safety precautions are concerned, will considerably lessen the possibility of personal injury. However, if normal safety precautions are overlooked or completely ignored, personal injury to the operator can occur.

There are also certain applications for which this tool was designed. We strongly recommend that this tool NOT be modified and/or used for any application other than for which it was designed. If you have any questions relative to its application, DO NOT use the tool until you have written us and we have advised you.

1. KNOW YOUR POWER TOOL. Read the owner's manual carefully. Learn the tool's application and limitations as well as the specific potential hazards peculiar to it.
2. KEEP GUARDS IN PLACE and in working order.
3. GROUND ALL TOOLS. If tool is equipped with a three-prong plug, it should be plugged into a three hole electrical receptacle. If an adapter is used to accommodate a two-prong receptacle, the adapter plug must be attached to a known ground. Never remove the third prong.
4. REMOVE ADJUSTING KEYS AND WRENCHES. Form a habit of checking to see that keys and adjusting wrenches are removed from the tool before turning it on.
5. KEEP WORK AREA CLEAN. Cluttered areas and benches invite accidents.
6. AVOID DANGEROUS ENVIRONMENT. Do not use power tools in damp or wet locations or expose them to rain. Keep work area well lighted.
7. KEEP CHILDREN AND VISITORS AWAY. All children and visitors should be kept a safe distance from work area.
8. MAKE WORKSHOP KID-PROOF with padlocks, master switches, or by removing starter keys.
9. DO NOT FORCE TOOL. It will do the job better and be safer at the rate for which it was designed.
10. USE RIGHT TOOL. Do not force tool or attachment to do a job it was not designed for.
11. WEAR PROPER APPAREL. No loose clothing, gloves, neckties or jewelry to get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.
12. USE SAFETY GLASSES. Also use face or dust mask if cutting operation is dusty.
13. SECURE WORK. Use clamps or a vise to hold work, when practical. It is safer than using your hand and frees both hands to operate tool.
14. DO NOT OVERREACH. Keep your proper footing and balance at all times.
15. MAINTAIN TOOLS IN TOP CONDITION. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
16. DISCONNECT TOOLS before servicing and when changing accessories such as blades, bits, cutters.
17. USE RECOMMENDED ACCESSORIES. Consult the owner's manual for recommended accessories. The use of improper accessories may cause hazards.
18. AVOID ACCIDENTAL STARTING. Make sure switch is on "OFF" position before plugging in cord.
19. NEVER STAND ON TOOL. Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted.

20. CHECK DAMAGED PARTS. Before further use of the tool, a guard or other part that is damaged should be carefully checked to ensure that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
21. DIRECTION OF FEED. Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.
22. NEVER LEAVE TOOL RUNNING UNATTENDED — TURN POWER OFF. Do not leave tool until it comes to a complete stop.
23. DRUGS, ALCOHOL, MEDICATION. Do not operate tool under the influence of drugs, alcohol or any medication.

IV. UNPACKING

Upon receipt of your GRIZZLY 16" Bandsaw, thoroughly inspect the container it is packed in. **Any** damage anywhere on the container must be considered suspect. Make sure you note any of this on the delivery receipt **before** you sign for the shipment. It will make claim processing - if you have to make one later - many times easier.

1. Now unpack the BANDSAW carefully, and take a quick inventory of the parts. **Caution:** The BANDSAW is a heavy unit. Do not over-exert yourself. If you have any doubt as to your lifting capabilities, get assistance.
2. In the event that the BANDSAW has to be moved up or down a flight of stairs be **sure** that the staircase is capable of holding the weight. Reinforce the stairs, if necessary, with vertical supports.

V. PIECE INVENTORY

When you remove all the material from the container you should have:

Stand	Bandsaw Unit
Table	Pulley Covers
Motor	Fence
Miter	Belts
Bolt Bags	

Since we are "counting parts" anyway, now is a good time to check the fasteners that were used for assembly. We would like to point out that the quantities used here are the minimum required to do the job; it is possible there will be some extra parts.

On the other hand, it is also possible that you may be short an item or two. If so, you may wish to consider replacing the item at the local hardware store. It is not that we are trying to cheat you, but if you are short two screws that cost a few cents apiece, it is cheaper to buy locally than writing or phoning us to say nothing of the time saved. Of course, if you are short many items, we want to

know about it because this is likely to be indicative of a problem somewhere. So, with this in mind, let's press on. We have detailed here the minimum quantity, the size, and the place(s) used for convenience:

Part	Qty*	Size	Where Used	Part #
83	24	5/16" x 18 x 1/2" L Rnd HD	Stand	82, 84, 85, 86
87	24	Flat Washer	Stand	82, 84, 85, 86
88	24	Nut	Stand	82, 84, 85, 86
33	4	1/2" x 12 x 1-1/2" L Hex HD	Base	41, 86
34	8	Flat Washers	Base	41, 86
35	4	Nuts	Base	41, 86
N/A	4	5/16" x 18 x 3/4" L Hex HD	Motor	76
87	8	Flat Washer	Motor	76
88	4	Nut	Motor	76
81	4	1/4" x 20 x 1/2" L Hex HD	Pulley Guard	80, 97
10	8	Flat Washers	Pulley Guard	80, 97
96	4	Nut	Pulley Guard	80, 97
N/A	4	1/4" x 20 x 2" Allen HD	Fence Rails	N/A
N/A	2	Spacer Tube	Fence Rails	N/A

If you are all right up to here, put your parts off to the side for the present and store your fasteners in a suitable place until you are ready to assemble the G1538. (An old muffin tin is ideal for this job.)

*Note: Not all of the fasteners that are listed in the parts list are recorded here. This is because there has been some preassembly at the factory.

VI. CLEAN—UP BEFORE ASSEMBLY

All of the unpainted surfaces on this BANDSAW, as well as a few of the painted ones, are coated with a preservative oil - to protect them from rust and corrosion during shipment. The best way to remove this is with a common paint thinner (mineral spirits) and a **lot** of paper towels. Do **not** use gasoline, lacquer thinner, or kindred products because of the extreme danger of flash fire and/or explosion; besides, these products do not work that much faster anyway. Do **not** use cholorinated solvents such as perchlorethylene; they will lift the paint and ruin the finish. Be careful while you are working around drive line parts where the belts will go, because, invariably, any kind of cleaner that cuts grease will, in the long run, be harmful to rubber. As you are doing this, please pay attention to the following safety rules:

1. Work only in a well ventilated area.
2. Make certain that there are no sources of ignition anywhere in the area; pilot lights in water heaters, clothes dryers, and the like.
3. No smoking while you are working.
4. The waste towels from the cleaning operation, while not explosive, are still quite combustible. You must dispose of them properly so they do not constitute a fire hazard to a building, adjoining property — or you!

When the cleaning is done, we would like to suggest that you give the unpainted parts, such as the table top a "shot" of a rust preventative oil. This is particularly true if you will be "taking a break" from the work for awhile.

That sums up our ideas on machine clean-up. Next, let's give a thought to where your new bandsaw will be set up.

A. FLOOR LOAD

This equipment is somewhat heavier than average. For planning purposes, the floor where this machine goes should be able to take a uniform distributed load of 150 pounds to the square foot. A concrete floor in a garage or basement will meet this requirement easily. A wood floor in a factory or commercial building is likely to be all right as is also, a floor in a commercial steel building. In any event, check this out before going further. You are cautioned that wood floors used in residential construction may be marginal.

B. WORKING CLEARANCES

Working clearances, suffice it to say will vary considerably from one customer to the next. What are your present needs? Future needs? Will auxiliary stands or work tables be needed later on? Do you have room for them? As you go about planning your shop, give a thought to these matters. Be sure to allow yourself sufficient room for a safe work area.

VII. ELECTRIC SERVICE REQUIREMENTS

The GRIZZLY 16" Bandsaw is furnished with a complete electrical package: A 3450 RPM TEFC 1½ HP Motor; push-button ON-OFF Magnetic Switch; and a cord set. The motor is single phase and should be operated on 110/120 volts.

A. GENERAL REQUIREMENTS

The Bandsaw motor should be connected to a dedicated line; i.e., not shared with any other machine. There should be a disconnect between power source and machine.

In addition to the above concerns, your equipment must be grounded. There is absolutely no exception to this requirement, whatsoever. We furnish the G1538 with a standard grounded line cord with a plug. There are many styles, types, and kinds of outlet plugs for shop use. These items can be purchased at any wholesale electrical distributor or at most industrial hardware stores. Remember, there are many types and kinds of plug configurations available. You can also "wire up" direct from the panel. Check your electrical codes in your area for proper wiring procedures.

In addition to the above, please verify that the receptacle you will be plugging the machine into is "really" grounded. If it is not, it will be necessary to run a separate grounding wire — which must be #12 copper or larger — from the machine frame to a suitable grounding media. By suitable media, we mean a cold water pipe or a grounding stud in or on an electric service panel.

In the following sections, we will give you values of fusing to use, depending on the operating voltage selected. Under no conditions are these values to be exceeded. Equipment that is returned for service that shows evidence of being operated over-fused will be repaired or replaced totally at the customer's expense, regardless of the present warranty status.

B. OPERATION ON 110/120 VOLTS

Your new G1538 will operate on either 110/120 volts or 220/240 volts, single phase. As you know, we supply the Bandsaw with a 1½ horsepower motor. A motor of this size does not create any unusual problems from the standpoint of installation planning; however, do be aware that if you operate at the lower voltage off a circuit that is already close to "maxed" out, you may experience problems with blowing fuses. Examples of the above are circuits that provide power to other motor loads, such as domestic laundry equipment; and circuits that go to kitchens that have a substantial appliance load connected to them. If you experience problems with fuses blowing for no apparent reason, check this out first. Other than that, on "normal" circuits, this equipment should run satisfactorily with no further work or concern on your part.

C. OPERATION ON 220/240 VOLTS

Normally, there is not any need to operate this machine on 220/240V. However, you can if you desire to do so. There are a few things that have to be done in order to accomplish this.

First of all, the 110V/120V plug must be removed from the cord. Secondly, the wires under the motor cover must be switched to operate on 220V/240V. Refer to the diagram inside on the lid. Lastly, you must replace the magnetic switch with one that operates on 220/240V and 2 HP. For your convenience we have detailed two outlet plug configurations that are of the grounding type and safe to use (see Figure 1). The NEMA Style numbers are given for your reference regardless of brand purchased.

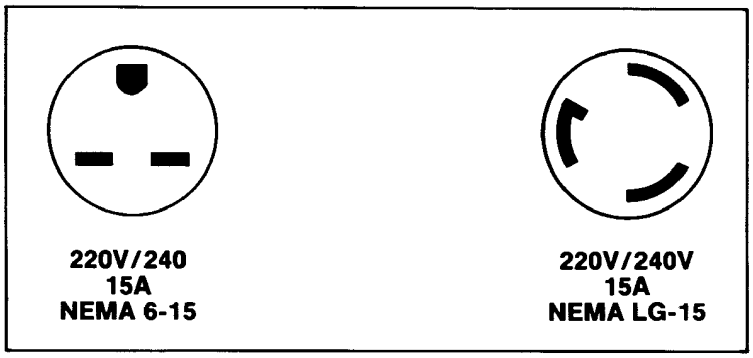


Figure 1 Shows electrical plug configuration.

Normally, on the higher voltage, the use of "slo-blow" fusing is not necessary because the current is much lower. A standard 2-pole, 15 ampere fuse or circuit breaker hook-up will work just fine here.

If it is necessary to use an extension cord, use one with #12 copper conductors or larger. Use NEMA approved couplers only and be rated for hard service, SJO, and contain a ground wire.

D. WORD OF CAUTION

NEVER cut off the ground pin from the plug. Should you choose to cut off the plug and use another style, make sure the type selected is suitable for use as an equipment grounding method, as not all kinds are. We have recommended electrical service requirements on how to "WIREUP" your 16" Bandsaw. This is by no means the last word on how to accomplish this. Many states, counties, cities, towns, etc., have their own electrical codes that must be complied with. If you have **any** doubts as to the **correct** electrical requirements, you may need for your application, consult with your local authorities, the national electrical code, and/or licensed electrician. If you have problems with the electrical system that we provide with this unit, call our service department.

VIII. ASSEMBLY SECTION

Since the main Bandsaw unit is preassembled at the factory, the rest of the parts to be assembled are relatively few and easy to attend to. In any event, we will assist you in your endeavor, to make it as easy and smooth as possible. The tools required for assembly are:

5mm Allen Wrench
12mm Open End Wrench
Adjustable Wrench
Phillips and Regular Screwdrivers
Dead Blow or Brass Hammer

If you have a metric socket set, that's great, otherwise, the tools listed will do just fine. We recommend this order of events in the assembly process. This is by no means the "only" way to assemble this unit, merely a suggestion.

Order of Assembly

1. Stand
2. Motor
3. Unit to Stand
4. Wiring
5. Align Pulleys
6. Table
7. Fence Assembly
8. Total Unit Check

A. STAND ASSEMBLY

1. Begin stand assembly by placing all the stand parts and bolt bag within easy reach to ease assembly.
2. Flip stand top (Pt.#86) upside down and swing motor base (Pt.#89) so that the base rests on top of the two adjusting screws. Locate one nut and washer below base and the other above. Just hand tighten for now. (See Figure 2.)

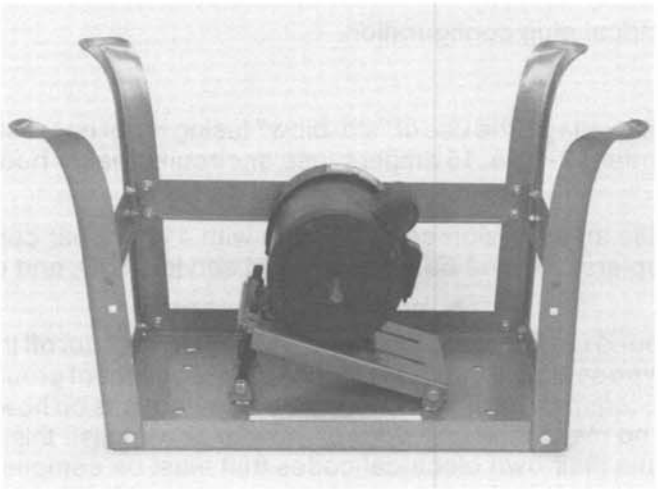


Figure 2 Shows stand upside down for ease of assembly.

3. Mount motor onto motor base at this time. Secure with the four 5/16"x18x¾" L Hex bolts, washers and nuts provided. Tighten snuggly for now.
4. Attach the four legs (Parts #82) to the top of the stand using the 5/16"x18x½" L RND HD bolts, washers and nuts provided. Do not tighten down bolts completely at this time.
5. Attach the four braces (Parts #84, 85) to the legs and secure with 5/16"x18x½" L RND HD bolts and washers.

   Note: Do not fasten the last brace to the pulley side of the stand at this time. This will enable you to have an unobstructed assembly area and room to align pulleys.
6. Flip stand right side up and wiggle stand around so it is level and symmetrical. Finally, tighten all of the stand bolts.

7. Place the bandsaw proper on the stand at this time (See Figure 3).

   Important: This unit is extremely heavy. If you have any doubts as to your lifting capabilities, get assistance.

8. Secure with the four ½"x1½" L Hex Bolts, washers and nuts provided. Tighten securely.

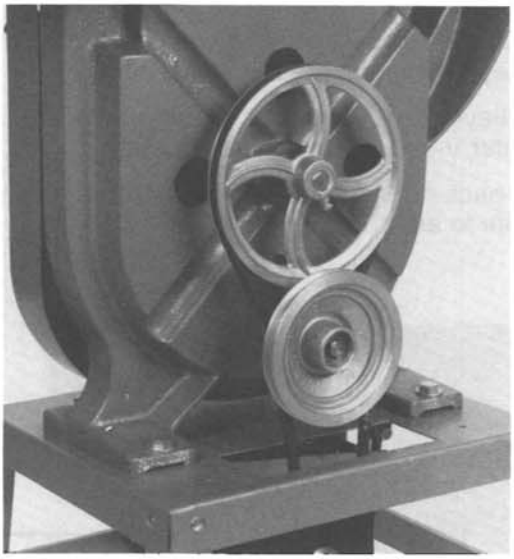


Figure 3 Shows unit on stand.

9. The electrical line from the switch can be fed through the plastic grommet on top of the stand and secured.

   Note: Line ends are your incoming power lines from the switch and are to be attached to the motor. (See diagram in back of manual.)

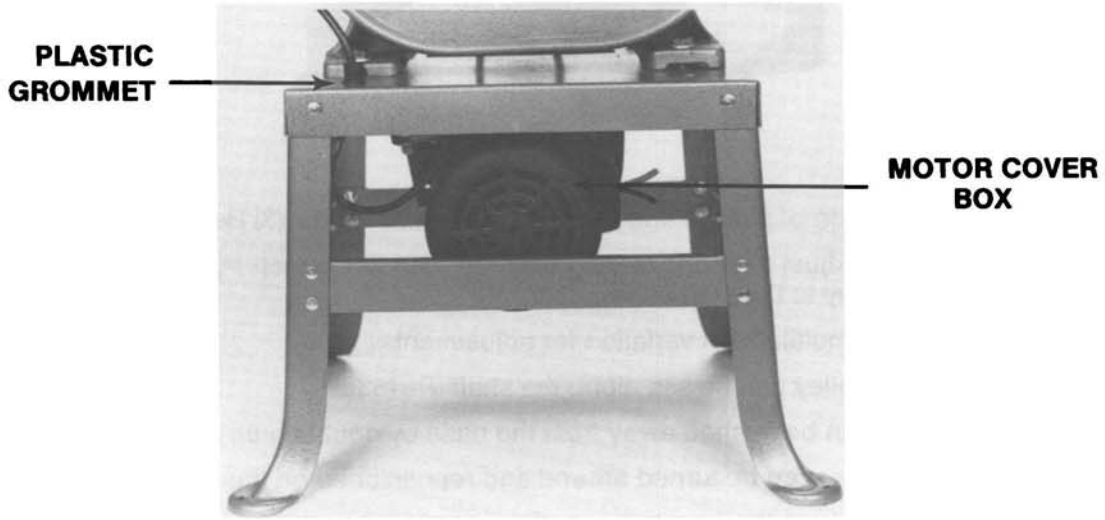


Figure 4 Shows cord arrangement to motor.

B. BELTS & PULLEYS

In order to insure proper power transmission from the motor to the band wheels, pulleys and belts should be properly aligned and tensioned.

1. To start, loosen the 3-step idler pulley (Pt.#95) and place tension on belt number 3 in Figure 5. Rule of thumb: Push on belt with your index finger. Deflection should be approximately ¾".
2. Place the 3-groove pulley (Pt.#77) on to motor shaft.
3. Wiggle motor around until the V-grooves line up with the 3-step pulley. Use a straight edge or plumb bob to check pulley alignment. (See Figure 6.)
4. Attach from the motor pulley to the step pulley, the smaller of the two belts. Line up the belt on one of the smaller diameter V-grooves on the step pulley.

   Note: You might have to back off the nuts on the 2 motor adjusting screws in order to swing motor up for enough room to attach belt.

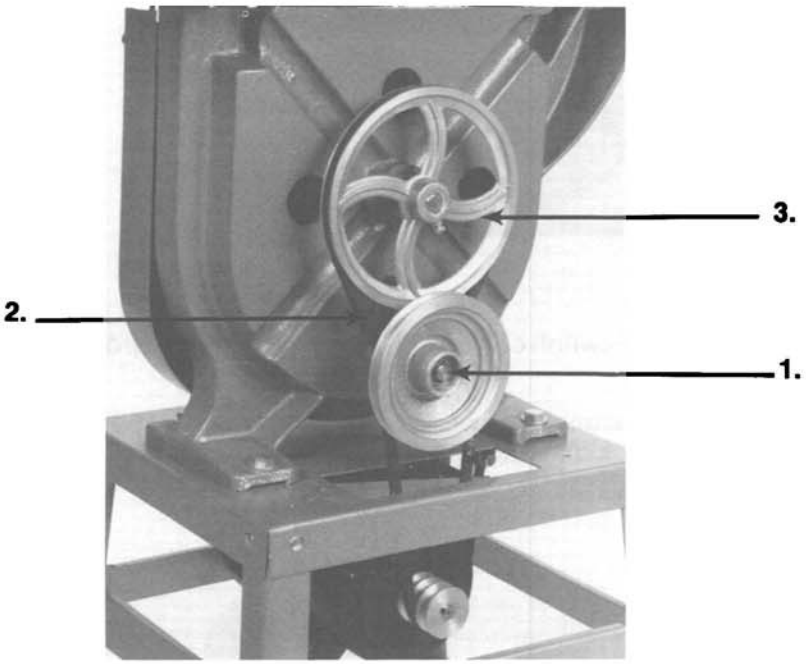


Figure 5 Shows position of pulleys and belts. (1) Pulley, (2) V-belt, (3) Bandwheel pulley.

5. To align pulleys, adjust the bandwheel pulley (Pt.#70) to the step pulley and then the three groove motor pulley to the step pulley.

   NOTE: There is a multitude of variation for adjustment.

a. The Bandwheel pulley can be slid along the shaft (Pt.#63).

b. The Step pulley can be pushed away from the base by doubling up a washer.

c. The 3-groove pulley can be turned around and repositioned on the motor shaft.

6. To tighten the belt from the step pulley to the motor, loosen the two nuts on the adjustment screws and lower the motor into position. The weight of the motor is sufficient for the amount of tension required. (See Maintenance Section.)

   Remember: Motor should remain level after any adjustments.

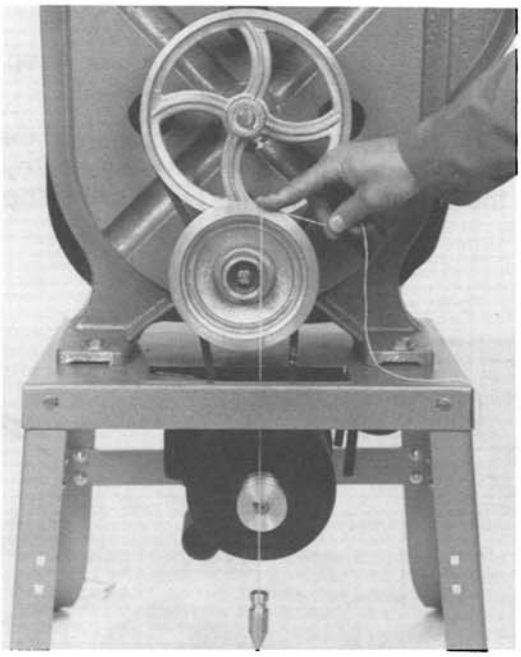


Figure 6 Shows using a plumb bob to align pulleys.

7. Place belt guards over the sheaves using the ¼" x20x½" L Hex HD bolts, washers and nuts provided (See Figure 7).

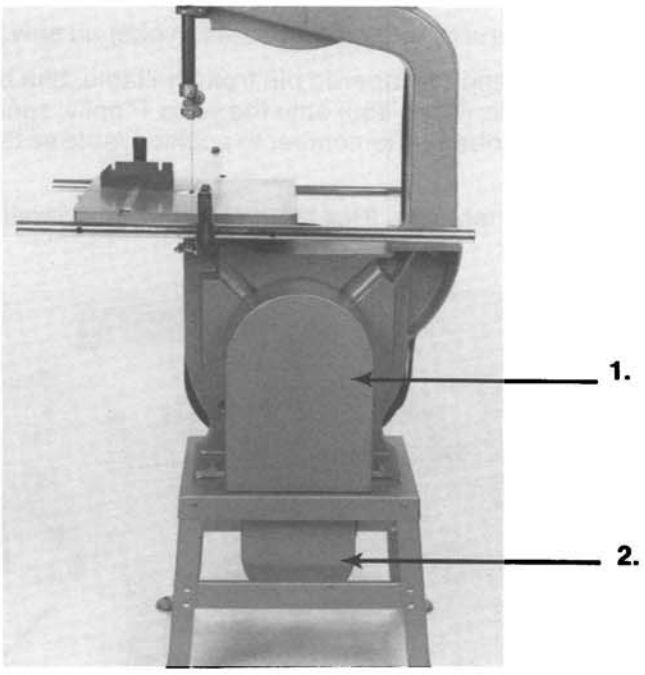


Figure 7 Shows large and small belt guards in position. 1. Large cover; 2. Small cover.

8. Fasten the brace to the two stand legs and secure tightly.
9. Inspect all work and tighten all fasteners at this time.

C. TABLE

Installation of the table is quite simple. The only concern is to keep grit from getting into the mounting yoke. Grit can make the table rock or difficult to move.

1. Mount the table yoke (Pt.#51) to the saw frame and secure with the two 5/16"x18x¾" L Hex bolts and washers as shown in Figure 8. Make sure there is not any foreign material between the yoke and frame. Align the pins and tighten the bolts down. There is no need to "reef" the bolts down.

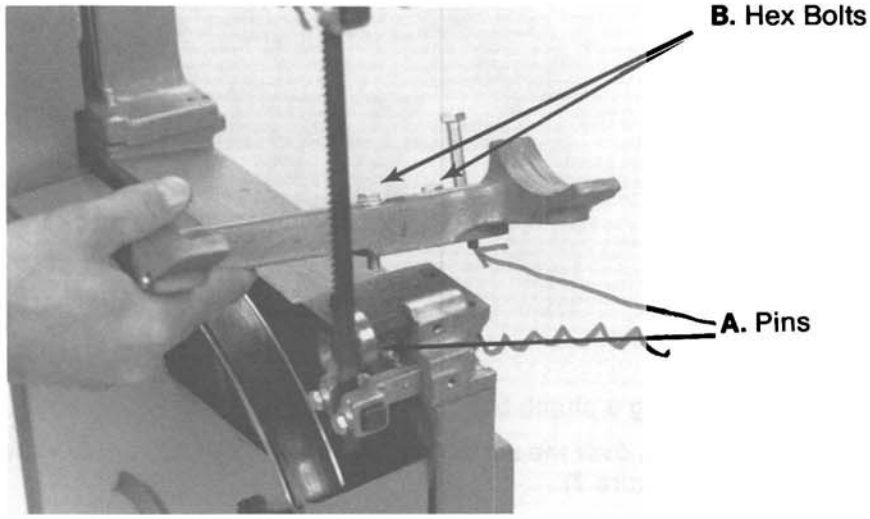


Figure 8 Shows positioning trunnion support bracket (yoke) on saw frame.

2. Remove the table insert and the tapered pin from the table. Slip blade through the table slot and set the table trunnions (Parts #50) onto the yoke. Finally, secure the table to the yoke by tightening the two star knobs. (1) Remember to position table so that the miter is to the right of the blade (See Figure 9).
3. Always keep the tapered table pin (Pt.#46) in place when operating bandsaw.

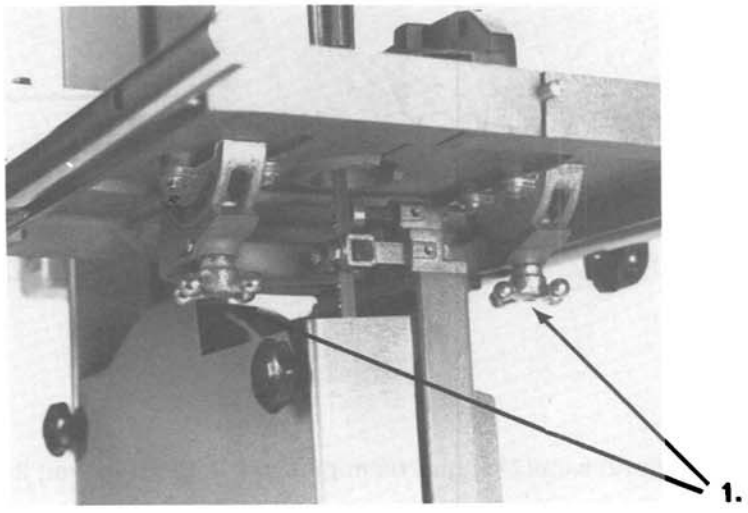


Figure 9 Shows location of star knobs.

D. FENCE

Our last item to install is the rip fence. Notice on the front edge and back edge of the table, there are four ¼" threaded holes. These holes accept the bolts that attach the tubes to the table. (See Figure 10).

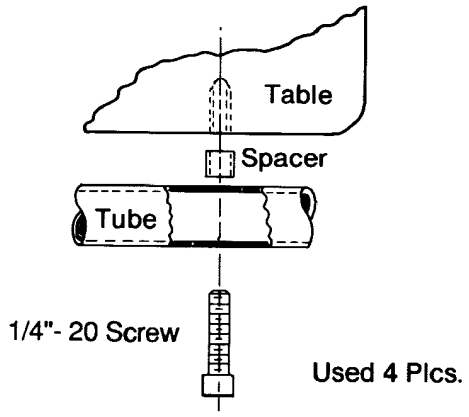


Figure 10 Shows how tubes are attached to table.

1. Use the four ½" x20x2"L Allen HD bolts and spacers to attach the tubes to the table.
2. Note that the rip fence must be mounted on the front tube **before** the two Allen HD bolts are installed.
3. Secure, and give the tubes a "shot" of light oil or silicon spray.

Congratulations! The saw is now all assembled! However, before you "fire her up", we have a few other items to review with you. So, please, resist that urge for just a short while longer and we'll review these items with you right away in Section 9, which begins next. Your patience will be rewarded in greater operating satisfaction and safety.

IX. SAFETY, OPERATIONS AND MAINTENANCE

We empathize with your keen interest in "watching the wheels go 'round", and you are just about ready. We do, however, want to review some procedural items with you first. When this is done, you will be well prepared to derive maximum value and utility from your new equipment. So, with no further adieu, let's carry on.

It's not the most pleasant thing in the world to say, but it's true, and it needs to be said: This equipment is **very** capable of injuring you most severely if used recklessly or carelessly. This does not mean you should be afraid of the machine; it *does* mean you must **always** respect it.

This is the fundamental "problem statement" of this part. Please follow along and **observe** the following safety items to fully address this concern.

A. SAFETY PROCEDURES

1. We've already addressed the business of correctly grounding the equipment, before placing it in service, back on page 7. The only thing we could add here would be: "make sure that it gets done".
2. Observe the rest of the electrical requirements as the fuse/circuit breaker sizing, wire sizing, and so forth.
3. Insure the machine sits firmly on the floor or on the ground before use. Any "wobbles" must be corrected by shimming or blocking.

4. While operating this equipment, don't wear jewelry, necklaces, loose-fitting clothes, or neckties. Long sleeves on shirts should be either buttoned securely at the cuff or rolled up.
5. Persons with beards and/or long hair should consider the use of a hairnet or a hat.
6. Always utilize eye/face protection while operating the saw. A full-face shield is ideal, as are safety glasses with side screens to block out foreign material from that direction. If made of glass, so-called heat-treated safety glass must be used. All safety clothing must be ANSI approved.
7. Any adjustments and/or maintenance is to be done with the power off **and** the plug pulled from the outlet.
8. Keep all safety guards in place.
9. Anchor or weight machine to the floor.
10. Never position fingers or thumbs with the line of cut.
11. Stand in front of the machine at all times.
12. Compound cuts should always be fully supported.
13. If workpiece binds or pinches on the blade, do not back workpiece away from blade while the saw is in motion.
14. Shut off the power immediately after a saw blade breaks, and remove blade only after the bandsaw comes to a complete stop.
15. Always support round stock in a V-block.
16. Blade should run at full speed before work is started.
17. Check blades for stress cracks. An evenly-spaced clicking sound is an indication of a cracked blade. Turn off power and inspect blade.
18. Do not use a small blade for large work or a large blade when sawing small radiuses.
19. When replacing blades, make sure teeth face down towards table. Force of cut is always down.
20. Never attempt to operate the saw with a dull blade or a blade that shows evidence of **any** kind of damage; teeth missing or bent, excessively worn, or any discoloration indicating that the blade was run too hot and/or was burned.
21. Be aware of the condition of the wood that you are cutting; watch out for loose knots, splits, cracks and related defects that could cause you to lose control. Also be aware of the possibility of embedded metal objects in the wood. Staples used to attach signs and/or labels at the lumber yard are the main offenders here; they are very destructive to blades.
22. The upper blade guide – this is the one that is adjustable – should be set so that the gap between it and the work does not exceed ¼". The blade depends on this for the support it needs to resist side-warp buckling with resultant loss of control and possible damage to the workpiece – or the operator!! Note here that this is most critical on the narrowest blades that are utilized for curved work and fine detail sawing.
23. The work must lay flat on the table, completely supported on both sides of the cut. Sawing through a section where only one side is being supported (See Figure 11) is an invitation for the work to "kick" or "buck"; when it does, if you happen to be holding on to the work near the blade, **you may certainly lose a finger! Don't do it this way!** Support the work with appropriate blocking, such as illustrated in the drawing, **and** plan your cutting so that no part of your body can get closer than 8" to the blade. Always support workpiece; never attempt to hold workpiece by hand.
24. DO NOT leave bandsaw running unattended for **any** reason. TURN IT OFF!
25. Be sure there is the correct amount of tension on the blade.

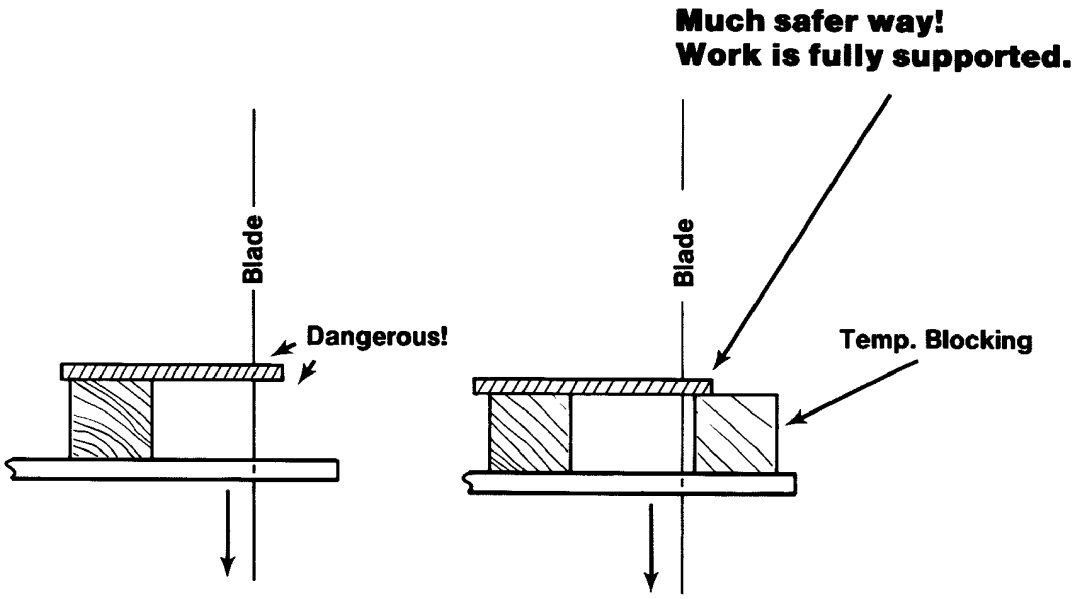


Figure 11 Represents a supported workpiece.

26. Use relief cuts when sawing curved pieces.
27. Always feed stock evenly and smoothly. DO NOT force or twist blade into cutting, especially when sawing small radii.
28. DO NOT stop saw prematurely by putting a piece of wood against blade.
29. Bandsaw blades can break easier if operated under cold conditions. It's a good idea not to operate the saw below 45°F.
30. Any modification of this bandsaw is strictly the decision of the owner/operator and is done at your own risk.
31. Always keep this machine in good condition. A periodic check of all the parts of the machine should be performed routinely.
32. This saw is not capable of cutting metal. Don't attempt to force it to do this; at best, you will be frustrated; at worst, you will ruin the equipment and/or injure yourself. We do sell equipment that cuts metal quite well, so if this is your need of the moment, please write or call, and we'll be more than glad to get you off on the right foot. Fair enough?
33. Wood waste is combustible, and wood dust can be **explosive!** Persons operating this equipment should **not** smoke while doing so; you need both of your hands for best control, anyway. Smoking and/or open fires should not be allowed of persons in the area, either.
34. Thoroughly clean machine and surrounding area at the conclusion of each use.
35. Perform machine maintenance services promptly when called for. We will discuss these in detail in the Maintenance Section.
36. If you are taking **any** kind of a drug or medication, whether medically prescribed or if you have consumed any alcoholic beverage, **do not** operate this saw!
37. If this saw will be set up in a location where it is likely that children will see it and/or have access to it, we strongly recommend that the electrical supply be set up utilizing a "hard-wire" method that terminates in a lockable master switch. Any electrician can do this for a nominal price. The peace of mind this will buy, particularly if the saw must share an area with other family activities, is priceless.

38. If there is something you don't know – or don't quite understand – **don't do it!** Ask for help first.
39. A lot of people have hurt themselves by trying to pick out wood scraps, splinters and so forth, from the crack in the table insert while the saw is running. Please don't attempt this: any jam or malfunction here or anywhere else must be corrected with the power off and after everything has come to a full stop! Sweep pieces of dust away with a brush. Keep brush within reach.
40. Never forget that bad habits can be dangerous. Frequently review these safety procedures to cultivate safe working habits.

X. CONTROLS AND ADJUSTMENTS

We are going to watch the "wheels go 'round" here shortly, so let's get acquainted with the controls and adjustments. Figures on the next page will be used to help you along. Detail labels given here in the text correspond to those on the picture.

Beginning with Figure 12, we have the following:

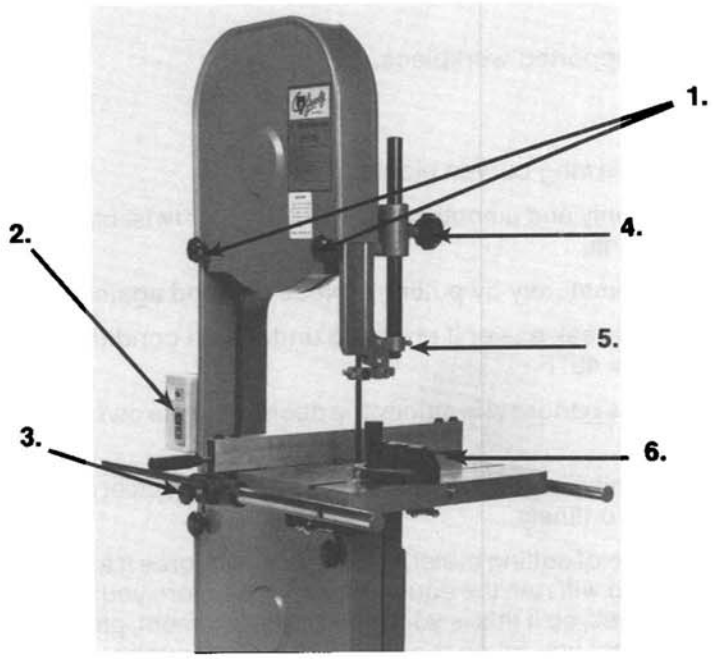


Figure 12 shows location of adjusting knobs and screws.

A. LOCATION

1. These four knobs secure the upper and lower wheel covers. Normally, the covers will **never** be removed, except to change a blade or make an adjustment to the blade tracking. These adjustments will be explained in the operating section.
2. This is the magnetic starter that controls the motor. The push-button stop/start station is here, and inside the enclosure is the thermal overload unit.
3. This knob is used to lock the rip fence in place.
4. This knob is used to adjust the upper guide so it will correctly clear the work.

5. The lock screw – behind the upper guide knob – allows you to remove the upper blade guide completely. **WARNING!** Remove the upper blade guide only when the saw is off, and then only to clear any jammed material, or to repair / replace a blade!! Note carefully that removal of the blade guide **also removes** about 5" to 8" of guarding over the blade – which is roughly, at this point, at eye level. Let's be real careful with this, OK?
6. Miter attachment. Operation of this is self-explanatory.

Let's now direct our attention to Figure 13, showing details around the upper part of the saw:

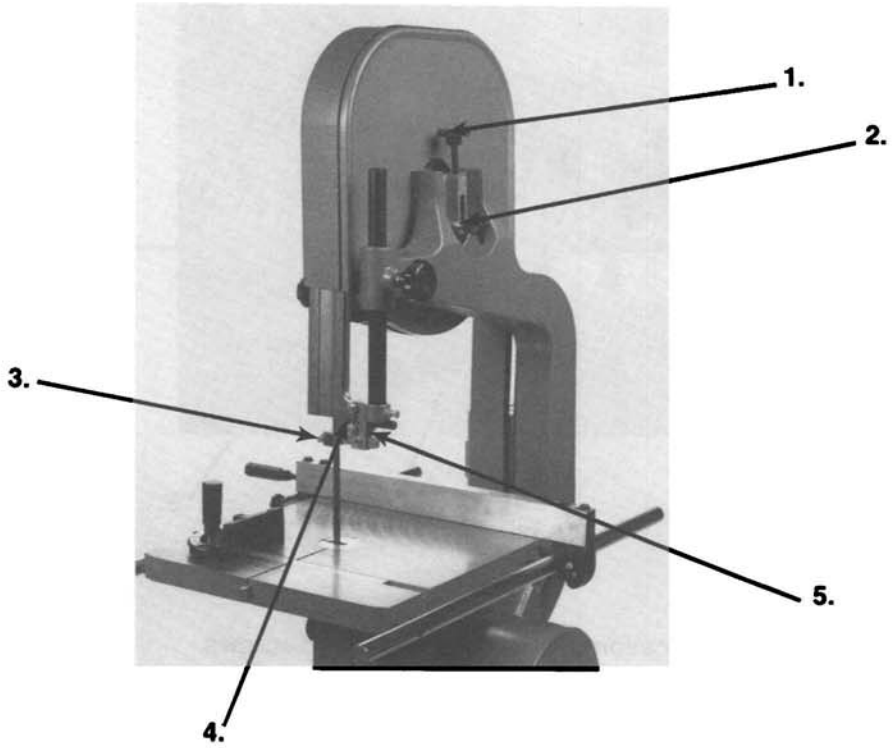


Figure 13 This figure shows location of adjusting knobs and screws.

1. This large knob is used to set tension in the saw blade. Turning clockwise increases tension, and vice versa.
2. The smaller knob is used to set the tilt of the upper wheel – or if you're a purist, the camber. As we will explain soon, in the operating section, this is probably the most critical adjustment on the saw. Note here that this adjustment has a check-nut on it for locking purposes.
3. These two screws are used to secure the steel guides in place. Normally, these guides will be set so that they just barely touch the sides of the blade. The purpose of these is to help stabilize the blade sideways – which would be a concern, for example, when cutting curves.
4. The holder for the steel guides is sideways adjustable. This knob loosens the holder.
5. A roller bearing is provided to aid in backing up the blade, particularly when additional support is needed while cutting through very deep sections. Back and forth adjustment is provided for with an allen screw. As before, you will normally operate with the track of the bearing race just touching the blade.

OK, that concludes our walk-through of the upper works, let's now move on to Figure 14, and check out the bottom details.

Looking at Figure 14, we have the following:

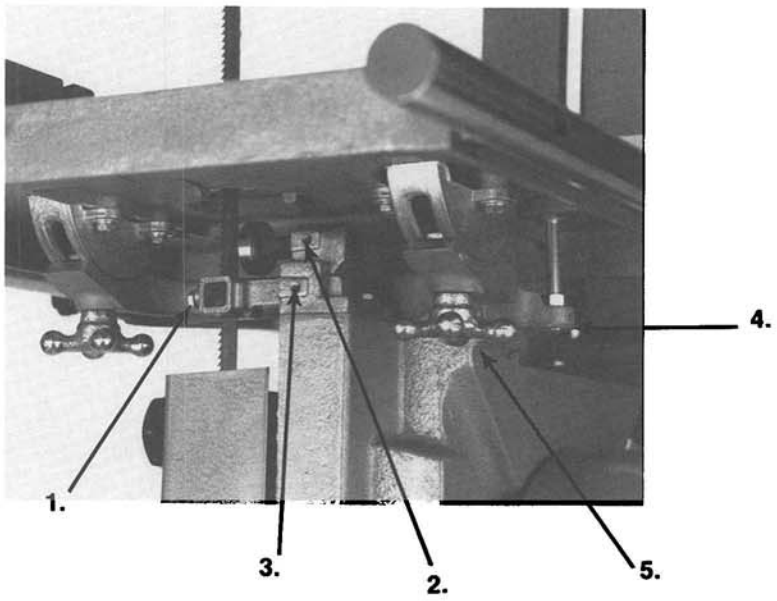


Figure 14 This figure shows location of adjusting knobs and screws.

1. Adjustment screws for blade guides. These are functionally identical to those described in the above section.The lower roller bearing is adjusted by sliding the bearing over. As before, this roller bearing works the same way as the one described for upper blade guide.

2. The bearing described in the preceding sentence is locked in place by means of a set screw.
3. Shows the allen screw that is used to secure the steel blade guide holder.
4. This bolt is used to aid in setting the level point on the table, and is fitted with a lock nut.
5. These two star knobs secure the table to the half-moon supports. Loosening these allows the table to be quickly adjusted for cutting angles.

B. BLADE ADJUSTMENT

When the saw left the factory, the blade was correctly tensioned and adjusted as part of the final inspection process. Unfortunately, this equipment has traveled a long way to reach you; depending on where you live, this could be over 10,000 miles. That is a lot of jostling around on a truck or a train, to say nothing of the boat ride! The bottom line is – it is unlikely that the saw will be usable "as-is" so far as blade adjustment goes. So, before we "power-up", let's check this out now.

C. TENSIONING

1. Make sure the electrical power is positively "off", either by a lockout switch or the plug pulled from the outlet. Remove the top and bottom wheel covers. Now, turn the top wheel over by hand. Does it turn freely? If so, move on to step "2", if not, use the blade tensioning knob (1) and loosen a turn or so. We want the blade to be just barely snug, not sloppily loose.

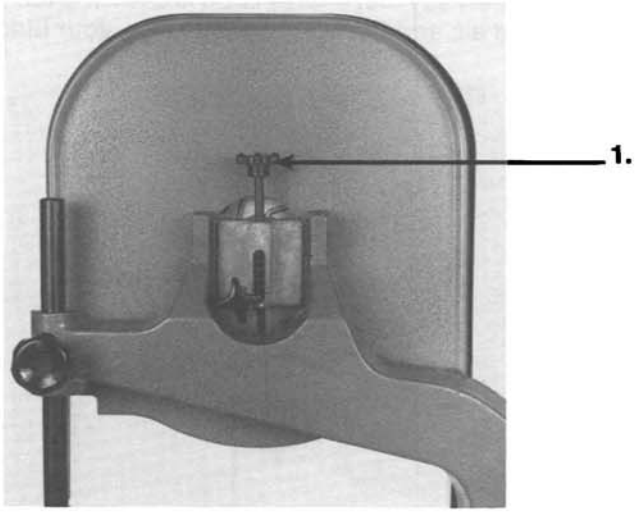


Figure 15 Shows location of tensioning knob.

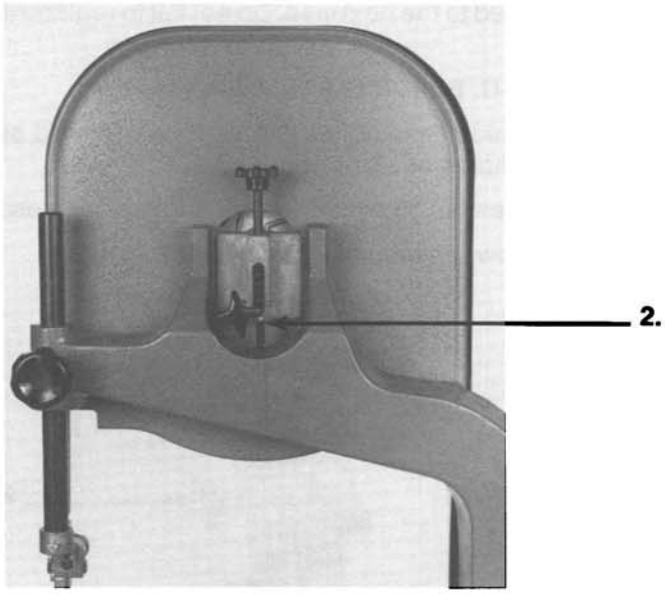


Figure 16 Shows tracking knob location.

2. When your blade and wheels will freely turn by hand, the tracking may now be readily set. Use the adjustment described for this job. Turn the wheel by hand while you adjust knob (2) and after an adjustment is made, turn the wheel **at least three full revolutions** to give the blade a chance to "walk" to its new position. This is particularly important for the orientation of the blade on the lower wheel, because the lower wheel is completely fixed. We want the flat back of the blade approximately centered on both wheel faces when we are done.

3. Now we set the final tension. It's difficult to describe with precision what "final tensions" should be, owing to the virtually infinite selections of blades that will work well in this saw. As a guide, however, please consider the following:

   With the wheel covers removed, press on the face of the blade, as illustrated in Figure 17, with your thumb. If you apply light to moderate pressure and can move the blade over to the other side of the guard, we can safely say that final tension is OK. If it is too tight, it will be an effort to do this – if it can be done at all; and if it is very easy to do, your blade is too loose.

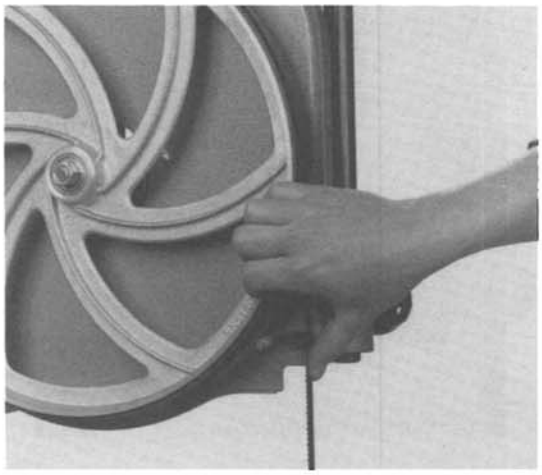


Figure 17 Shows tightening the blade.

Make final "turning" check by hand. If OK – and there must be **no** metal-to-metal contact anywhere to be OK – proceed to the next step. Do not fail to replace the wheel covers now, all right?

D. BLADE GUIDE ASSEMBLIES

Any adjustment of the blade guide assemblies should be performed **only** after tensioning and blade tracking has been accomplished.

1. Adjust the blade guide assembly as close to the workpiece as possible.
2. Loosen lockknob (2) and lower assembly into position.
3. Retighten lockknob (2).

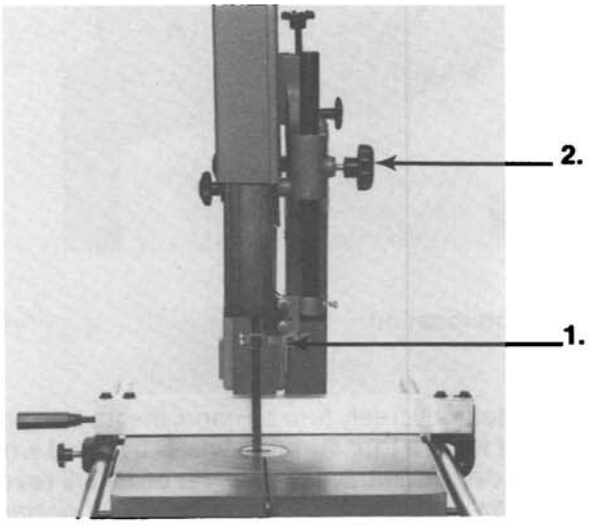


Figure 18 Shows adjustment knob locations for raising and lowering guide assembly.

E. UPPER GUIDE ASSEMBLY

The upper blade support bearing (3) should be adjusted to within 1/64" behind the blade back. The blade support bearing prevents the blade from being pushed too far back on the wheel. It also offers the blade rigidity and support during the sawing operation (See Figure 19).

1. Loosen set screw (4) and adjust accordingly. Retighten.

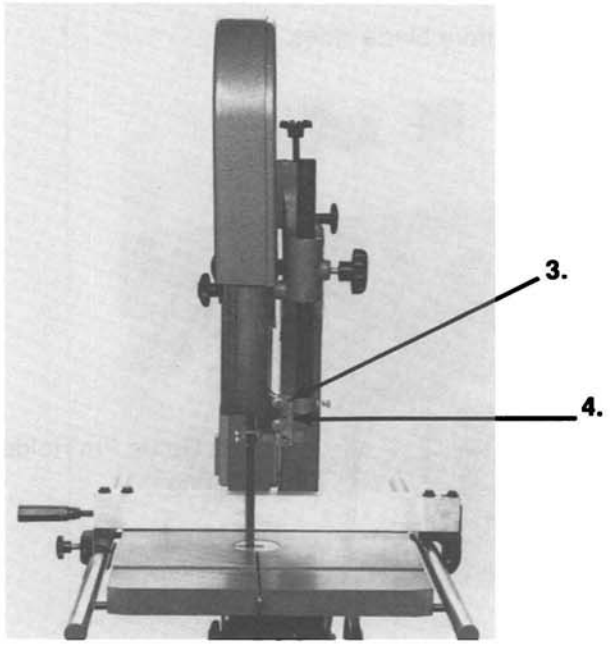


Figure 19 Shows location of set screw for guide adjustment.

The guide pin holder (Pt.#7) should be adjusted so the pins are 1/16" behind the gullet line. The steel pins should be .002" to -.004" away from the blade (See Figure 20).

1. To accomplish this, place two pieces of paper between pins and blade.
2. Lock pins into position and remove paper.

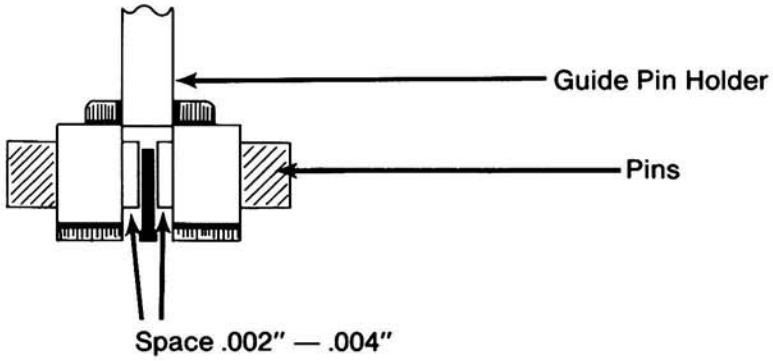


Figure 20 Shows position of guide pins to blade.

F. LOWER BLADE GUIDE ASSEMBLY

As with the upper guide assembly, the lower guide assembly should be adjusted to the same tolerances, that is:

1. Bearing to within 1/64th of blade back.
2. Guide pin holder to within 1/16" of blade gullets.
3. Pins .002" to -.004" away from blade sides.

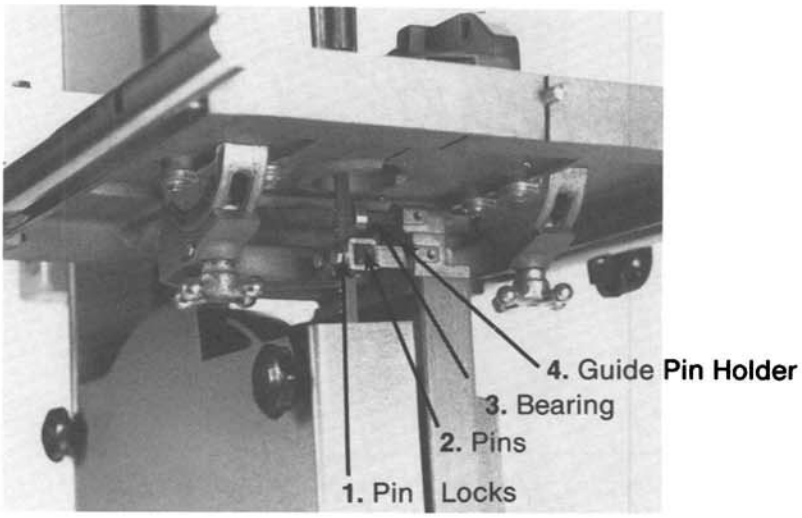


Figure 21 Shows location of lower guide adjustment.

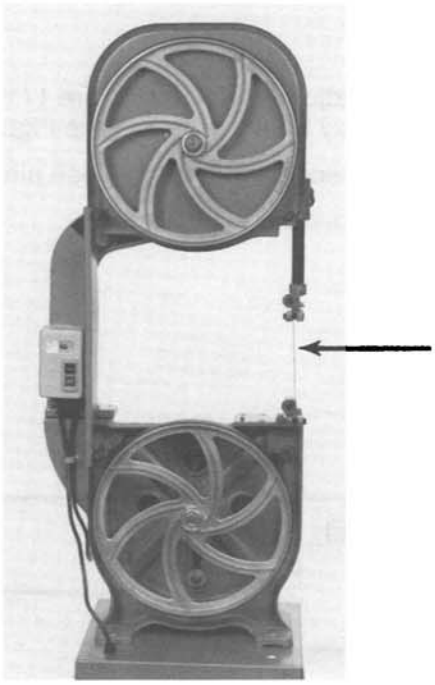


Figure 22 Shows **incorrect** guide pin positioning.

4. Adjust guide and secure **all** adjustment knobs and screws.
5. Make sure blade tracks true. Inspect for any blade deflection by the guides. The bearings should rotate only under load.

G. TABLE TOP

Way back – when you were unpacking and setting up the saw, we had you clean the preservative oil off the cast iron table top, then hit it with some light weight oil. If you will mainly be using the saw for rough carpentry work, this system may be OK for you in terms of keeping your table top clean, smooth and free of rust. What you would do, as a general procedure, is simply wipe off the table top before starting work and shoot it with some oil at the end of the job.

However, if finish work is your "thing", as they say, the preceding method will probably be unacceptable. For one thing, any kind of oil – including light penetrating oils – will stain wood. It isn't a question of will it or not; just one of degree. Another concern here is that the ability of the wood to be stained or painted uniformly has now been compromised.

To get around this problem, there are 3 possible approaches which we have found that work pretty well. The first step is to thoroughly clean and dry the table top, then:

1. Using a soft cloth, work talcum powder (baby powder) around on the table top. Like they say, "smooth as a baby's bottom!"

This system works well, gives good results, and really makes material handling a breeze. On the other hand, some people object to the extra dust that this will inevitably raise up.

Too, one has to be extra cautious; we do not want to find ourselves in a situation where material handling is so easy we manage to feed some fingers into the saw blade, along with the stock!! A word to the wise!

2. Your second choice is to apply an automotive **paste** wax that contains carnuba to the table top after cleaning. The same precautionary notes as in "1" apply here, too. Note that this methods works best, however, in ambient temperatures that do not exceed 70°F.

3. For best results, we recommend Dri-Cote (G1751) for all metal surfaces. This is a spray coating that is scientifically formulated to reduce friction and inhibit rust. See catalog for current pricing and ordering information.

H. TABLE TILT

The bandsaw table will tilt from L 10° to R 45°.

1. To tilt, loosen star knobs (See Figure 23).
2. Position table to desired degree tilt.
3. Retighten.

There is a positive stop for 90°. See Figure 23 for location

1. Using a square, adjust the table adjusting bolt (Pt.#56) and raise or lower table until 90° is reached.
2. Secure bolt by tightening the checknut.

To square miter slot to bandsaw blade:

1. Loosen the trunnion bolts underneath the table.
2. Using a square in the miter which is set at 90°, run square along side blade and inspect for any discrepancy.
3. Wiggle table around and secure position by retightening the trunnion bolts.

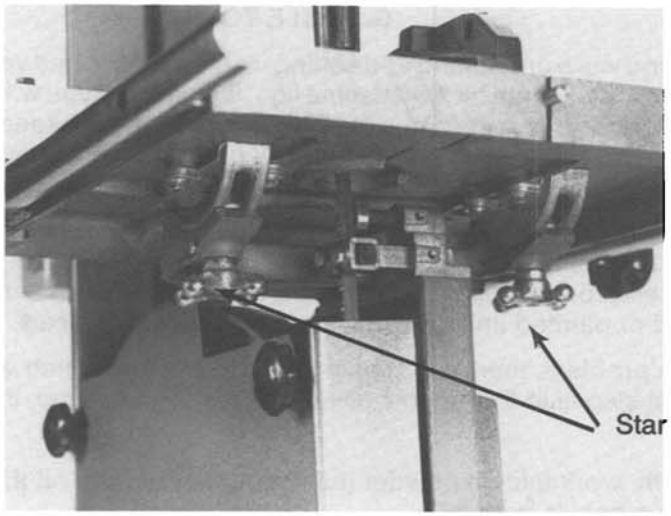


Figure 23 Shows star knobs.

XI. OPERATIONS

The bandsaw is one of the most versatile wood cutting tools in the shop. It is capable of performing many different cutting functions, such as:

Straight cuts	Irregular Shapes
1. Miters	1. Simple and complex curves
2. Angles	2. Duplicate parts
3. Compound Angles	3. Cutting circles
4. Resawing	

And many other cutting functions too numerous to mention.

A. GENERAL

Using the bandsaw for the right job not only makes it easier on yourself, it makes the work come out right. While you can perform many types of straight cuts such as angling and mitering, they will not be as precise as ones done on a table saw. Due to the flexibility of the band – its design, and its tendency to take the easiest course – the texture of the cut is somewhat rougher in nature than one performed on a tablesaw. However, where a tablesaw excels in precision straight cuts and miters, the bandsaw takes over when performing resawing and irregular-shaped cuts (as well as being safer to operate). A properly-adjusted and tuned-up bandsaw is capable of performing many sawing functions with ease and accuracy.

One of the most common errors is blaming the bandsaw for not performing up to expectations. Using the wrong kind of blade or a cheap one usually results in unsatisfactory performance. Misuse of the saw or using incorrect sawing techniques can result in miscuts and hours of frustration (unsafe, too). Remember, the saw does not do the cutting, the blade does, with the operator's guidance. Keeping the bandsaw "tuned up" is important, and adjustments should be performed periodically to keep the bandsaw running first class.

Before starting the machine, see that all adjustments are properly made and the guards are in place. Turn the pulley by hand to make sure that everything is correct **BEFORE** turning on the power.

Keep the top guide down close to the work at all times. Do not force the material against the blade too hard. Light contact with the blade will permit easier following of the line and prevent undue friction, heating and work-hardening of the blade at its back edge.

KEEP THE SAW BLADE SHARP and you will find that very little forward pressure is required for average cutting. Move the stock against the blade steadily, and no faster than will give an easy cutting action.

Avoid twisting the blade by trying to turn sharp corners. Remember, you must **saw** around corners.

As stated before, the bandsaw is a simple machine to operate as well as one of the safer tools to operate in the shop.

It was essentially designed for sawing curves, but can perform many straight-line cuts as well.

B. BLADE INSTALLATION

To change blades, proceed as follows:

1. Remove upper and lower wheel guards.
2. Release tension on bandsaw blade. (See Tensioning Adjustment Section.)
3. Remove table insert and tapered pin from table.
4. Slip blade off wheels and guide it through the table slot. **Be careful!**
5. To install a new blade, reverse the above procedures. Also see Blade Adjustment Section.

C. BLADES

A bandsaw blade is a delicate piece of steel that is subjected to tremendous strain. You can obtain long use from a bandsaw blade if you give it fair treatment. Be sure you use blades of the proper thickness, width and temper for the various types of material to be cut.

Always use the widest blade possible. Use the narrow blades only for sawing small, abrupt curves and for fine, delicate work. This will save blades and will produce better work. Bandsaw blades may be purchased, welded, set and sharpened ready-for-use. For cutting wood and similar materials, we can supply them in widths of ¼", ⅜", ½", ¾" and 1".

Cheap blades will give you "cheap" performance. Always select and use good-quality bandsaw blades. Also choose the right blade for the right job. Not doing so is often the cause of premature band failure.

Any one of a number of conditions may cause a bandsaw blade to break. Blade breakage is, in some cases, unavoidable, being the natural result of the peculiar stresses to which such blades are subjected. It is, however, often due to avoidable causes, most often to lack of care or judgement on the part of the operator in mounting or adjusting the blade or guides. The most common causes of blade breakage are: (1) faulty alignment and adjustment of the guides, (2) forcing or twisting a wide blade around a curve of short radius, (3) feeding too fast, (4) dullness of the teeth or absence of sufficient set, (5) excessive tightening of the blade, (6) top guide set too high above the work being cut, (7) using a blade with a lumpy or improper finished braze or weld and, (8) continuous running of the saw blade when not in use for cutting.

New blades for the GRIZZLY 16" Bandsaw are 111" long. The adjustment will accommodate blades up to a maximum length of 111½" and to a minimum length of 110" (approx.).

BLADE WIDTH	MINIMUM RADIUS
1/8"	3/16"
3/16"	5/16"
1/4"	5/8"
3/8"	1½"
1/2"	2½"
5/8"	4"
3/4"	5½"
1"	7¼"

This table lists the smallest radius capable of being cut on a particular width blade.

D. CUTTING CURVES

When cutting curves, turn the stock carefully so that the blade may follow without being twisted. If a curve is so abrupt that it is necessary to repeatedly back up and cut a new kerf, either a narrow blade is needed or a blade with more set is required. The more set a blade has, the easier it will allow the stock to be turned, but the cut is usually rougher than where a medium amount of set is used.

Always make all the short cuts first, then proceed to the longer ones. Also make all of the straight cuts before the curved ones. In many instances making relief cuts will keep the blade from being pinched or twisted.

E. RESAWING

Many of our customers buy our bandsaws specifically for resawing. Problems can arise due to incorrect blade selection or improper setup and operation. The 16" bandsaw was not specifically designed for resawing. However, if you choose to do so, use good judgment. Trying to resaw a large workpiece might create an undue amount of strain and also be unsafe for the operator.

Again, the important factor is in blade selection. When selecting a blade, use the widest one offered for use on your bandsaw. The blade should be of the best quality in order to take the maximum amount of strain. In most applications a hook or skip tooth style will work just fine. Because most of the lumber being resawn is sent back to the planer for final dressing, you can choose blades with fewer teeth per inch (3 to 6). These types and kinds of blades offer larger gullet capacities, reduce heat buildup, and place more HP per tooth where it is needed most: in the cut.

To resaw:

1. The bandsaw must be adjusted correctly. (See Adjustment Section.)
2. Table must be square with blade.
3. Blade must be in good condition.
4. Use of a pivot block or fence for reference point.
5. Draw center line on board.
6. Support ends of board if necessary.
7. Feed slowly and evenly.

When using a fence to resaw, the board often leads away from the fence. This can be caused by a number of reasons:

1. Teeth are set heavy on one side.
2. Teeth are more dull on one side than the other.
3. Fence is not square to blade.
4. Incorrect amount of tension.

You can compensate by angling the fence or marking the board and sawing freehand.

We recommend using the pivot block method. This method compensates for different thicknesses in material and lead, gives you a quick reference point, and is easy to set up. Do not force the wood into the blade. This distorts the blade, causes excessive heat, and often results in band breakage, as well as miscut lumber.

This completes the operating section of this manual. Using a bandsaw can be a very simple or complex operation. We can not - within the pages of this manual - demonstrate all of the procedures, methods, and tricks necessary to be an accomplished woodworker. We highly recommend obtaining more information on bandsaw use and operation, or talking with a professional woodworker or vocational instructor.

If you're doing well up to here, try to cut some wood. How does it work? Does it cut squarely? If not, adjust your table stop and/or table adjustment knobs, as needed. Check results with a combination square or a carpenter's square.

You're now up and running! Good job!

However, before you stick this manual up on the top shelf in your shop library, may we please have your attention for just a bit longer? Specifically, we would like to review some maintenance material with you. This way, you can be assured of the fine quality of operation that you are seeing now — ten years from now and longer.

XII. EQUIPMENT MAINTENANCE

Owing to the fact that all of the running gear runs on ball bearings, you will find that this machine requires very little maintenance. However, a word to the wise: A little maintenance does **not** mean no maintenance! We will review machine maintenance here, from the perspectives of both repairs and preventative techniques. Please see to it that this work is done. A little effort here will richly reward you in terms of equipment dependability and accuracy, as well as lowest possible total cost of operation.

A. LUBRICATION

All of the bearings on this machine incorporate shielded ball bearings. Lubrication is not required on your part for the life of the bearings.

As an approximate yardstick for bearing life, the saw wheel bearings and the motor bearings, in commercial service – i.e. 3 to 4 running hours per day, 5 days a week – should reasonably last **about** 4 to 5 years. Of course, there will be variations to this, so only regard this as a rough estimate.

It's easy to tell if a bearing is failing. The first sign is when the saw picks up a rumble that it never had before, and that momentarily gets noisier under load. If allowed to get worse, the next thing that happens is more pronounced rumbling noises, plus the journal containing the offending bearing will start running hotter than normal. These two conditions, noise and heat, will continue to get worse as deterioration progresses. Final failure is seizure. Of course, we know that none of our customers would ever permit matters to get this bad, right?

Actually, the only parts on this saw that require periodic lubrication on your part are the half moon trunnions on the table adjusting system. To refresh your memory, these are shown in Figure 14 on page 18. Clean sawdust and spent lubricant off them, then lubricate the mating surfaces with 6 to 8 drops or so of 20 or 30 weight automotive engine oil. (You may want to give the guide bar a shot of oil.)

That's about it on routine lubrication services. Next, let's look at service on the drive belt.

B. V-BELT MAINTENANCE

We recommend that you go about V-belt maintenance in the following manner:

Correct tension on your belts is achieved when you can press on one in the middle of the track, between the two sheaves, with moderate pressure from your thumb, and deflect it **ABOUT** ¾"; you may wish to review Figure 6 on page 11. This is somewhat subjective, of course, but please keep in mind that belts that are too tight will bind, run hot, and have a shortened life. That's pretty clear, right?

So far as adjustment goes, review the methods we previously outlined on page 10. The belt tension should be checked and, if need be, adjusted every 3 months. If used in a commercial environment, do this monthly. Make sure pulleys are secure and in line on shafts.

Note: Do not get oil or grease on the belts. Their performance and life will be reduced.

C. PERIODIC MAINTENANCE

You have two primary concerns with the blades on this equipment: making sure that they are sharp and keeping them correctly tensioned. We shall review these two ideas now.

Although these blades can be sharpened, it is usually cheaper and a lot more convenient to buy new replacement blades.

The importance of correct tension on the blades cannot be overemphasized. Loose, poor-fitting blades will slip on the tires (the rubber banding on the wheels), and thereby track poorly and cut unreliably. Blades that run very tight, as you may well suspect, will have their own set of problems. For openers, the spring steel from which the blades are made of will work harden and break much sooner when over-tensioned.

ALWAYS keep an eye out for fasteners becoming loose due to vibration. Make sure guards are in place and secure. Perform periodic maintenance, and adjust bandsaw on a routine basis. **Remember** any modification of this bandsaw is the responsibility of the owner/operator and is solely his/her decision and is not recommended.

XIII. MACHINE DATA

Design Type: ..... 2 Wheel Floor Model, 3 Speed
Capacities:
- Maximum cutting width ..... 15⅞"
- Maximum cutting height (depth) ..... 10-½"
- Tilting table ..... L 10°/R 45°

Overall Dimensions:
- Table ..... 16"x16"x1½" thick
- Overall height ..... 64"
- Height floor to table ..... 40"
- Width of unit ..... 22"
- Depth of unit ..... 24"
- Weight (gross) ..... 260 lbs.
- Weight (in place ..... 245 lbs.

Construction:
- Table ..... Precision Ground Cast Iron
- Wheels ..... Aluminum Die Cast – Fully Balanced with Rubber Tires
- Rip fence ..... Double Lock Adj/Extruded Aluminum
- Wheel covers ..... Pre-Formed Sheet Steel

Motor:
- Type ..... TEFC Capacitor Start Induction
- Horsepower ..... 1½ HP
- Phase/Cycle ..... Single Phase/60 HZ
- Voltage ..... Prewired to 110V
- Amps ..... 16 Amps
- RPM 3450
- Bearings ..... Sealed & Lubricated-for-life Ball Bearings

Switch: ..... On/Off 110V Thermal Magnetic
Blade:
- Sizes available ..... From ¼" to 1"
- Standard blade length ..... 111"
- Blade speeds ..... 2766 FPM @ 660 RPMs
  1580 FPM @ 377 RPMs
  1005 FPM @ 240 RPMs
- Guides ..... Steel Blocks w/Ball Bearing behind blade

G1538 Crate Size (Bandsaw): ..... H16"xW24"xL53"
Stand Dimensions: ..... H16"xW24"xL21"

Specifications, while deemed accurate, are not guaranteed.

XIV. CLOSURE

The following pages contain the directory of spare parts for your model G1538 Bandsaw. Also, for your convenience, we have included a wiring diagram of the equipment. This follows the spare parts section.

You are welcome to write or call whenever you need assistance with parts or are requesting information about their current prices. When inquiring, please tell us the complete model number and serial number of the machine you have. This way, if there has been an improvement made since you purchased the saw, we can see to it that you get the most up-to-date item(s).

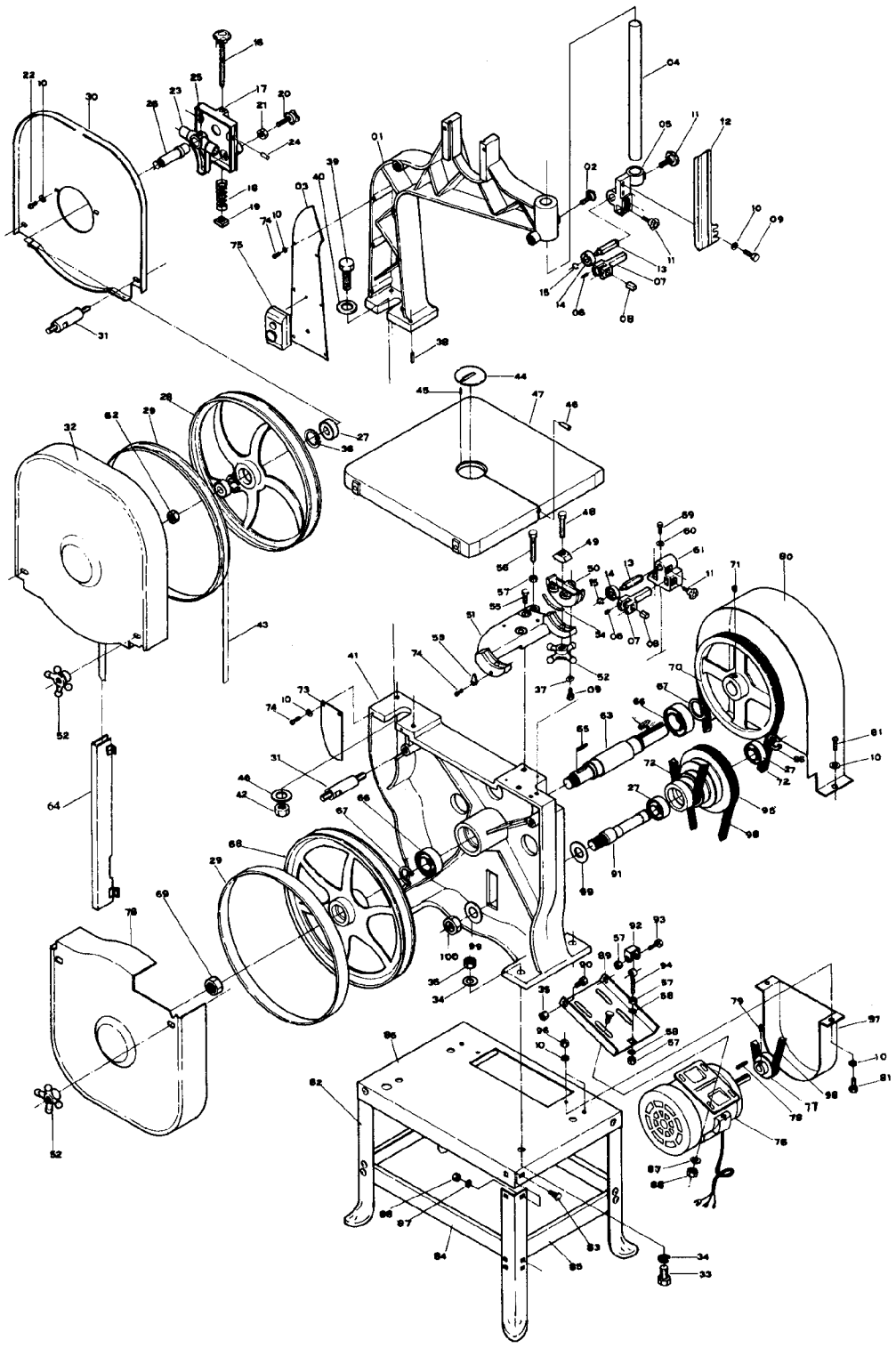
Thank you again for your business and continued support. We hope to be able to serve you again soon.

XV. PARTS

Item	Description	Size No.	QTY.
1	Upper Frame Arm		1
2	Lock Handle		1
3	Switch Plate		1
4	Guide Post		1
5	Support Bracket For Upper Guide		1
6	Screw		4
7	Guide Block		2
8	Square Guide Block		4
9	Cross Screw		8
10	Flat Washer		20
11	Knob Screw		4
12	Guard Plate		1
13	Sleeve		2
14	Ball Bearing	6200ZZ	2
15	C-Clip		2
16	Blade Adjust Screw		1
17	Upper Wheel Sliding Brkt.		1
18	Spring		1
19	Square Bolt		1
20	Knob Screw		1
21	Nut		1
22	Pan Screw		1
23	Upper Wheel Shaft Hinge		1
24	Pin		2
25	Spring Pin		1
26	Upper Wheel Shaft		1
27	Ball Bearing	6202ZZ	4
28	Upper Wheel		1
29	Wheel Protector		2
30	Upper Wheel Guard (Inner)		1
31	Stud		4
32	Upper Wheel Guard (Outter)		1
33	Screw		4
34	Flat Washer		8
35	Nut		6
36	C-Ring		4
37	Flat Washer		6
38	Pin		2
39	Screw		1
40	Flat Washer		2
41	Base		1
42	Nut		1
43	Saw Blade		1
44	Table Insert		1
45	Spring Pin		1
46	Pin		1
47	Working Table		1
48	Stud		2
49	Trunnion Clamp Shoe		2
50	Trunnion		2

Item	Description	Size No.	QTY.
51	Trunnion Support Bracket		1
52	Star Knob		6
53	Indicator		1
54	Gauge		1
55	Screw		2
56	Hexagon Stud		1
57	Hexagon Nut		4
58	Flat Washer		4
59	Hexagon Screw		2
60	Flat Washer		2
61	Support Bracket For Lower Guide		1
62	Nut		1
63	Lower Wheel		1
64	BLADE COVER		1
65	Key		1
66	Ball Bearing		2
67	C-Clip		2
68	Lower Wheel Shaft		1
69	Nut		1
70	Motor Pulley (Large)		1
71	Screw		1
72	Belt		1
73	Plate		1
74	Cross Screw		10
75	Switch		1
76	Motor		1
77	Motor Pulley (Small)		1
78	Key		1
79	Screw		1
80	Pulley Guard		1
81	Screw		4
82	Stand Foot		4
83	Screw		24
84	Adjusting Plate (L)		2
85	Adjusting Plate (S)		2
86	Stand		1
87	Washer		28
88	Nut		28
89	Motor Base		1
90	Screw		2
91	Shaft		1
92	Holder Base		1
93	Screw		1
94	Screw		1
95	Pulley		1
96	Nut		4
97	Motor Pulley Guard		1
98	Belt		1
99	Washer		2
100	Nut		1

A. PARTS BREAKDOWN



MODEL G1538

16" Bandsaw Pulley Configuration